Electronic Version
Stylesheet Version v1.1.1

Claims

[c1] 1. A tray-out control method for moving out a loading tray of an optical drive comprising:
detecting whether an optical disk is paced on the loading tray;
applying a first forcing function to the loading tray when the optical disk is placed on the loading tray; and
applying a second forcing function to the loading tray when the optical disk is not placed on the loading tray;
wherein a maximum value of the second forcing function is larger than a maximum value of the first forcing function.

[c2] 2. The tray-out control method of claim 1 wherein the second forcing function is used to overcome a greater magnetic attraction.

[c3] 3. The tray-out control method of claim 2 wherein the greater magnetic attraction is generated from a close contact between a spindle motor and a clamping device.

[c4] 4. The tray-out control method of claim 1 wherein the first forcing function is used to overcome a lesser magnetic attraction.

[c5] 5. The tray-out control method of claim 4 wherein the lesser magnetic attraction is generated from a non-close contact between a spindle motor and a clamping device.

[c6] 6. The tray-out control method of claim 1 wherein the optical drive is vertically arranged.

[c7] 7. A tray-out control method used in an optical drive for overcoming an attraction between a spindle motor and a clamping device comprising:
applying a first forcing function to a loading tray when the spindle motor and the clamping device are not closely in contact with each other; and
applying a second forcing function to a loading tray when the spindle motor and the clamping device are closely in contact with each other;
wherein a maximum value of the second forcing function is larger than a maximum value of the first forcing function.

[c8] 8. The tray-out control method of claim 7 wherein when the spindle motor and the clamping device are not closely in contact with each other, an optical disk is placed on the loading tray.

[c9] 9. The tray-out control method of claim 7 wherein when the spindle motor and the clamping device are closely in

contact with each other, an optical disk is not placed on the loading tray.

[c10] 10. The tray-out control method of claim 7 wherein the optical drive is vertically arranged.